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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,985	11/26/2001	Kozo Akiyoshi	13825	4297
7590 06/30/2005 Dowell & Dowell, P.C. Suite 309 1215 Jefferson Davis Highway Arlington, VA 22202			EXAMINER DANIELS, ANTHONY J	
			ART UNIT 2615	PAPER NUMBER

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/991,985

Applicant(s)

AKIYOSHI ET AL.

Examiner

Anthony J. Daniels

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/28/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,7,10 and 27-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4,7,10 and 27-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment, filed 2/28/2005, has been entered and made of record. Claims 1,4,7,10,27-34 are pending in the application.
2. Applicant's amendments to the specification and drawings have overcome the examiner's objection.

Response to Arguments

3. Applicant's arguments with respect to claims 1-25 have been considered but are moot in view of the new ground(s) of rejection for the new set of claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1,4,10,27-29,31-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Turner et al. (US # 6,198,505).

As to claim 1, Turner et al. teaches a digital camera, comprising: an image pick-up unit which captures images (Figure 1, CCD imagers "24","34"; *{The 4 imagers together are a unit.}*); a mode setting unit (*The power-on switch of the camera is the mode setting unit.*) for setting a

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simplified motion picture shooting mode in said image pick-up unit (Col. 3, Lines 41-43; *{Examiner interprets simplified motion picture shooting mode as defined by two frames per second of the high resolution CCD imagers "24".}*); a camera controller (Figure 1, shutters "21" and "31"; *{The opening of shutters allow the CCD imagers to accumulate charge.}*) which, when said mode setting unit is set to said simplified motion picture shooting mode (*Power-on*), controls said image pick-up unit so that a first image and a second image are captured by said image pick-up unit at predetermined intervals (Col. 3, Lines 41-43; *{The first and second image are the two frames per second of the high resolution imagers "24". The low resolution imager "34" also takes the same two frames as the high resolution imager, but it may have multiple between those two frames.}*); and a matching processor (Figure 1, image processing electronics "27") which computes a matching between the first image and the second image (Col. 3, Lines 61-67; *{The high speed motion vectors are a matching of pixels from one frame to the next, then the next, the next, etc., so the matching of the high speed data is a matching between all images of the high speed sequence, which includes the first and second image in low resolution form.}*), and which then outputs a matching result as a corresponding point file (Col. 3, Lines 64-67; high speed vectors), wherein the simplified motion picture mode is an intermediate shooting mode between a still picture shooting mode and a motion picture shooting mode (Col. 3, Lines 41-43; *{Still images are taken a single frame. Motion images are taken at a rate normally of 15-60 frames per second. Therefore, an imager that takes 2 frames per second is in the intermediate shooting mode as defined by applicant.}*).

As to claim 4, Turner et al. teaches a digital camera according to claim 1, further comprising an intermediate image generator (Figure 1, image processing electronics "27"),

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which generates an intermediate image between the first image and the second image based on the corresponding point file (Col. 3, Lines 61-67; *{The interpolated image is between the two high resolution frames.}*).

As to claim 10, Turner et al. teaches a digital camera according to claim 4, further comprising a storage unit that stores the first image, the second image and the corresponding point file in a manner such that the first image, the second image and the corresponding point file are associated with one another (*It is inherent that a buffer memory or some sort of temporary storage is provided in the image processing electronics "27", because the images taken by the high resolution imager has to be memorized so interpolation can take place, and the motion vectors from one frame to the next have also to be memorized. Examiner interprets "associated with each other" such that the frames, and motion vectors they are stored in the vicinity of each other.*).

As to claim 27, Turner et al. teaches a digital camera according to claim 1, wherein said predetermined interval is approximately one second (Col. 3, Lines 41-43; *{If frames of the high resolution imager are taken at 2 per second, this means the interval is 1/2 second, which is approximately one second.}*).

As to claim 28, Turner et al. teaches a digital camera, comprising: an image pick-up unit which captures images (Figure 1, CCD imagers "24","34"; *{The 4 imagers together are a unit.}*); a mode setting unit (*The power-on switch of the camera id the mode setting unit.*) for setting a simplified motion picture shooting mode in said image pick-up unit (Col. 3, Lines 41-43; *{Examiner interprets simplified motion picture shooting mode as defined by two frames per second of the high resolution CCD imagers "24".}*); a camera controller (Figure 1, shutters "21"

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and “31”; *{The opening of shutters allow the CCD imagers to accumulate charge.}*) which, when said mode setting unit is set to said simplified motion picture shooting mode (*Power-on*), controls said image pick-up unit so that a plurality of images are captured by said pick-up unit at a predetermined interval (Col. 3, Lines 41-43; *{The plurality of images are the two frames per second of the high resolution imagers “24”. The low resolution imager “34” also takes the same two frames as the high resolution imager, but it may have multiple between those two frames.}*); and a matching processor (Figure 1, image processing electronics “27”) which computes a matching between adjacent images of said plurality of images (Col. 3, Lines 61-67; *{The high speed motion vectors are a matching of pixels from one frame to the next, then the next, the next, etc., so the matching of the high speed data is a matching between all images of the high speed sequence, which includes the adjacent images (Frames 1 and 2 from the high resolution imager “24”) in low resolution form.}*), and which then outputs a matching result as a corresponding point file (Col. 3, Lines 64-67; high speed vectors), wherein the simplified motion picture mode is an intermediate shooting mode between a still picture shooting mode and a motion picture shooting mode (Col. 3, Lines 41-43; *{Still images are taken a single frame. Motion images are taken at a rate normally of 15-60 frames per second. Therefore, an imager that takes 2 frames per second is in the intermediate shooting mode as defined by applicant.}*).

As to claim 29, Turner et al. teaches a digital camera according to claim 1, further comprising an intermediate image generator (Figure 1, image processing electronics “27”), which generates an intermediate image between said adjacent images based on the corresponding point file (Col. 3, Lines 61-67; *{The interpolated image is between the two high resolution frames.}*).

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As to claim **31**, the limitations of claim 31 can be found in claim 10. Therefore, claim 31 is analyzed and rejected as previously discussed with respect to claim

As to claim **32**, Turner et al. teaches a digital camera according to claim 28, wherein said predetermined interval is approximately one second (Col. 3, Lines 41-43; *{If frames of the high resolution imager are taken at 2 per second, this means the interval is 1/2 second, which is approximately one second.}*).

As to claim **33**, Turner et al. teaches a digital camera according to claim 28, wherein said predetermined interval is greater than approximately 1/30 of a second (Col. 3, Lines 41-43; *{1/2 of a second is greater than 1/30 of a second.}*).

As to claim **34**, Turner et al. teaches a digital camera according to claim 28, wherein said predetermined interval is greater than approximately 1/15 of a second (Col. 3, Lines 41-43; *{1/2 of a second is greater than 1/15 of a second.}*).

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 7,30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turner et al. (see patent Number above) in view of McIntyre et al (US # 6,091,909).

As to claim **7**, Turner et al. teaches a digital camera according to claim 4. The claim differs from Turner et al. in that it requires that the digital camera comprise a display unit for displaying the first image, the second image and the intermediate image.

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In the same field of endeavor, McIntyre et al. teaches the uses of LCD in digital cameras (Col. 1, Lines 52-56). In light of the teaching of McIntyre et al., it would have been obvious to one of ordinary skill in the art to include a display unit in the digital camera of Turner et al., because an artisan of ordinary skill in the art would recognize that this would allow the user to be provided with instant feedback on the quality of the interpolation of his/her images (see McIntyre et al., Col 1, Lines 54-56).

As to claim **30**, the limitations of claim 30 can be found in claim 7. Therefore, claim 30 is analyzed and rejected as previously discussed with respect to claim 7.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony J. Daniels whose telephone number is (571) 272-7362.

The examiner can normally be reached on 8:00 A.M. - 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AD
6/26/2005


NGOCH YEN VU
PRIMARY EXAMINER